UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,064	10/06/2000	Gordon Ian Rowlandson	39199-9511-00	2853

7590 03/31/2005

Joseph D Kuborn
Andrus Sceales Starke & Sawall
Suite 1100
100 East Wisconsin Ave
Milwaukee, WI 53202

EXAMINER	
BUI, KIM T	
ART UNIT	**PAPER NUMBER**
3626	

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	
Office Action Summary	09/684,064	ROWLANDSON, GORDON IAN	
	Examiner	Art Unit	
	Kim T. Bui	3626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/31/2005 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-6,8-12,14-17, 19-21, 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mardirossian (6011991) in view of Selvester et al. (6230048).

(A) As per claim 1, Mardiorossian discloses real time support system and method for monitoring physiological data, comprising the steps for:

a. establishing a library of interpreted physiological data records (i.e., storing in memory 57 a plurality of files or patterns of measured brain activity or responses of particular individuals) (Mardirossian, col. 2, lines 26-31);

b. gathering sensed physiological signal (Mardirossian, col. 3, lines 41-43);

c. processing including transforming the sensed physiological signal according to predefined criteria to generate an interpretation (Mardirossian, col. 3, lines 46-47; col.

5, lines 16-18, col. 6, lines 12-14, col. 6, line 62 to col. 7, line 2). The Examiner interprets the processing of sensed physiological information including normalizing, transforming, or neural network analyzing disclosed by Mardirossian in the cited passages as interpreting the physiological data based on a predetermined set of criteria;

d. correlating (i.e. comparing) the transformed pattern or waves in one embodiment (i.e., interpretation) with the physiological data records in a library of physiological data records (Mardirossian, col. 3, lines 46-52);

Mardirossian fails to explicitly recite the step for displaying the interpretation and the correlated physiological records on a display. This, however, is disclosed by Selvester et al. Selvester et al. teaches a pictorial display electrocardiographic interpretation system wherein an ultimate interpretation (i.e., a interpretation resulted by correlating of heart signal and an input ECG related data) can be presented in static or motion display (Selvester et al. Figs 2, 3, col. 3, lines 55-58, col. 9, line 52-56). It would have been obvious to one having ordinary skill in the art at the time of the invention to include pictorial display system of Selvester et al into Mardirossian with the motivation of facilitating the operation of the system by providing highly information visual output of the an ultimate interpretation. Selvester et al. col. 3, lines 60-65.

(B) As per claim 2, Maridossian and Selvester teach the communication link to an expert location in col. 3, lines 47-49 of Maridossian, and col.10, lines 47-54 of Selvester et al.

(C) As per claims 3,4, Selvester et al. teaches the text and voice messages in col. 24, lines 37-44.

(D) As per claims 5,6,24,30, checking the integrity of physiological data (i.e. filtering, pre-processing), extracting patterns and comparing are common practice for processing physiological signal. This is disclosed by Mardirosian on col. 6, lines 12-14, col. 6, line 62 to col. 7. Sevester also teaches these practices on col. 8, lines 55-65, col. 3, lines 52-58.

(E) As per claims 8, 9, text message (i.e. text report) and physiological data are displayed in col. 24, lines 36-41 of Selvester et al.

(F) As per claim 10, Mardirossian discloses real time support system for monitoring physiological data comprising:

a. a library of interpreted physiological data records (i.e., memory 57 for storing a plurality of files or patterns of measured brain activity or responses of particular individuals). Mardirossian, col. 2, lines 26-31;

b. a physiological data acquisition device for gathering sensed physiological signal (Mardirossian, col. 3, lines 41-43); a processing module including at least a transforming modules for generating an interpretation of the sensed physiological information (Mardirossian, col. 3, lines 46-47; col. 5, lines 16-18, col. 6, lines 12-14, col. 6, line 62 to col. 7, line 2).The Examiner interprets the processing of sensed physiological information including normalizing, transforming, or neural network analyzing disclosed by Maridossian in the cited passages as interpreting the physiological data.; and a correlation module (i.e. comparing device) for comparing the

interpretation with the physiological data records to determine a set of correlated data records (i.e., match or close match) (Mardirossian, col. 3, lines 46-52).

Mardirossian fails to explicitly recite the output device. This, however, is disclosed by Selvester et al. See Selvester et al. Figs 2, 3, col. 3, lines 55-58, col. 9, line 52-56. It would have been obvious to one having ordinary skill in the art at the time of the invention to include output device disclosed by Selvester et al into Mardirossian with the motivation of facilitating the operation of the system by providing a highly informative visual output. Selvester et al. col. 3, lines 60-65.

(G) As per claim 11, display device is disclosed in Fig. 3 of Selvester et al.

(H) As per claims 12, 15, expert location for receiving transmitted physiological data and communication module are disclosed in col. 3, lines 47-49 of Mardirossian, and col.10, lines 47-54, col. 15, lines 1-9 of Selvester et al.

(I) As per claim 14, Selvester et al teaches an information filter in col. 1, lines 58-61.

(J) As per claims 16,17, 23, Selvester et al teaches the text and voice messages in col. 24, lines 37-44.

(K) As per claims 19, 31 libraries of supplemental materials (i.e. word, phrase, thought, subject specific and non-subject specific etc.) are disclosed in col. 2, lines 26-31 of Mardirossian, and col. 2, lines 45-61 of Selvester et al.

(L) As per claims 20, 21, Mardirossian teaches that physiological data can be heart signal (Mardirossian, col. 5, line 24). Selvester teaches ECG signal in col. 3, lines 55-58.

(M) As per claim 25, Mardirossian discloses real time support system and method for monitoring physiological data, comprising the steps for:

a. acquiring sensed physiological signal (Mardirossian, col. 3, lines 41-43);

b. processing including transforming the sensed physiological signal according to predefined criteria to generate an interpretation (Mardirossian, col. 3, lines 46-47; col. 5, lines 16-18, col. 6, lines 12-14, col. 6, line 62 to col. 7, line 2). The Examiner interprets the processing of sensed physiological information including normalizing, transforming, or neural network analyzing disclosed by Maridirossian in the cited passages as interpreting the physiological data based on a predetermined set of criteria;

c. correlating (i.e. comparing) the transformed pattern or waves in one embodiment (i.e, interpretation) with the physiological data records in a library of physiological data records (Mardirossian, col. 3, lines 46-52).

Mardirossian fails to explicitly recite the step for displaying the interpretation and the correlated physiological records on a display. This, however, is disclosed by Selvester et al. Selvester et al. teaches a pictorial display electrocardiographic interpretation system wherein an ultimate interpretation (i.e., a interpretation resulted by correlating of heart signal and an input ECG related data) can be presented in static or motion display (Selvester et al. Figs 2, 3, col. 3, lines 55-58, col. 9, line 52-56). It would have been obvious to one having ordinary skill in the art at the time of the invention to include pictorial display system of Selvester et al into Mardirossian with the motivation

of facilitating the operation of the system by providing highly information visual output of the an ultimate interpretation. Selvester et al. col. 3, lines 60-65.

(N) As per claim 26, Mardirossian teaches the step for establishing a library of interpreted physiological data records (i.e., storing in memory 57 a plurality of files or patterns of measured brain activity or responses of particular individuals) in col. 2, lines 26-31.

(O) As per claims 27-29, expert location for receiving transmitted physiological data and communication module are disclosed in col. 3, lines 47-49 of Maridossian, and col.10, lines 47-54, col. 15, lines 1-9, Fig. 3 of Selvester et al. Selvester et al. also teaches the text and voice messages in col. 24, lines 37-44. The communication module disclosed by Selvester et al. includes the Internet (col. 10, line 53 of Selvester et al). This meets the "instant" feature in claims 28, 29.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mardirossian in view of Selvester et al. as applied to claim 1 above, and further in view of Cairnes (6139494)

(A) As per claim 7. Mardirossian and Selvester et al. fail to recite a library of education material. However, this is well known as evidenced by Cairnes. Cairnes teaches a physiological monitoring device including a library of educational material. See Cairnes, col. 12, lines 18-26. It would have been obvious to one having ordinary skill in the art at the time of the invention to include and present selected portion of the educational library disclosed by Cairnes with the motivation of improving the patient's understanding on therapies and health care issues and therefor facilitating the wellness

and preventive care system which serves to prolong life, reduce sickness, and lower the cost for operating hospital and clinic. See col. 12, lines 35-40 of Cairnes.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mardirossian in view of Selvester et al. as applied to claim 10 above, and further in view of Bardy (6203495).

(A) As per claim 18. Mardirossian and Selvester et al. fail to recite a library located on the server. However, it is well known as evidenced by Bardy. Bardy teaches a physiological monitoring device wherein database of physiological data is located on a server. Bardy, col. 4, lines 14-16. It would have been obvious to one having ordinary skill in the art at the time of the invention to include a server with the motivation of increasing the capacity of the storage device to network level, thereby expanding the application to world wide system. See Bardy, col. 7, lines 1-5.

6. Claims 13, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mardirossian in view of Selvester et al. as applied to claims 10, 12 above, and further in view of Albert et al. (6264614).

(A) As per claim 13, Mardirossian and Selvester et al. fail to recite a porter. However, this is well known as as evidenced by Albert et al.. Albert et al. discloses a heart monitoring system wherein the Internet addressing capability is included. Web site and the Internet connection allow browsing and downloading of information and acquisition application program. See Albert et al. Fig.3, col. 6, lines 45-50. It would have been obvious to one having ordinary skill in the art at the time of the invention to include web site or porter with the motivation of facilitating the operation of the system by providing

the ability to access the Internet to browse information and download application programs. See Albert, col. 10, lines 45-65.

(B) As per claim 22, Mardirossian and Selvester et al. fail to a browser. However, it is well known to include browser in physiological monitoring system as evidenced by Albert et al.. Albert et al. teaches a physiological monitoring device that includes web browser. Albert et al., Figs 8, col. 10, lines 37-40. It would have been obvious to one having ordinary skill in the art at the time of the invention to include a browser with the motivation of facilitating the operation of the system by providing the ability to navigate and access the Internet to browse information and to download application programs. See Albert, col. 10, lines 45-65.

Response to Arguments

7. Applicant's arguments filed 01/31/2005 have been fully considered but they are not persuasive. Applicant's arguments will be addressed herein below:

(A) On page 7 of the Remarks, Applicant argues the term "integrity". In response to this argument, and the amendment to claim 7, the rejection of claims 7, 24 and 30 under 35 USC 112, second paragraph is hereby withdrawn.

(B) On page 8 of the Remarks, Applicant argues that Mardirossian does not teach interpreting the sensed physiological signal according to predefined criteria and cannot teach correlating the interpretation with physiological data records. Examiner disagrees, Mardirossian clearly teaches the step for interpreting and correlating as discussed in the above rejection of claim 1.

It is the Examiner's position that Applicant argues no specific meaning of the term "interpreting/interpretation", except the standard definition. As such, the term

"interpreting/interpretation" should be given its "broadest reasonable interpretation". Webster's Ninth New Collegiate Dictionary principle copyright 1983 defines "interpret" as "to explain or to tell the meaning: present in understandable terms" and "interpretation" as "the act or the result of interpreting: explanation". The attached copy of the definition was included in the Office Action mailed November 03, 2004. The interpretation recited by the applicant is met , at least by the transformation of the monitored brain signals in to an understandable forms (i.e., pattern or curve) disclosed by Mardirossian. See particularly col. 3, lines 46-47 of Mardirossian for the transforming step and various passages, for example, col. 5, lines 16-18, col. 6, lines 12-14, col. 6, line 62 to col. 7, line 2 of Mardirossian for common practice for processing/interpreting sensed physiological signal. The correlating of the interpretation with stored the physiological data records in a library of physiological data records is clearly disclosed by Mardirossian in various passages, for examples, col. 3, lines 46-52, lines 59-61, col. 4, lines 6-9.

(C) On page 9 of the Remarks, Applicant argues the motivation for combing and that the combination would not include the claimed elements. In response, it is submitted the motivation for combining "It would have been obvious to one having ordinary skill in the art at the time of the invention to include pictorial display system of Selvester et al into Mardirossian with the motivation of facilitating the operation of the system by providing highly information visual output of the an ultimate interpretation. Selvester et al. col. 3, lines 60-65.", "It would have been obvious to one having ordinary skill in the art at the time of the invention to include output device disclosed by Selvester et al into

Mardirossian with the motivation of facilitating the operation of the system by providing a highly informative visual output. Selvester et al. col. 3, lines 60-65.are clearly stated is clearly stated in the above rejections of claims 1,10, 25.

Both Mardirossian and Selvester et al. are both directed to physiological interpretation system. As such, it is readily apparent that a person of ordinary skill in the art of physiological analysis is going to look for the display of the physiological interpretation system disclosed by Selvester et al to improve the physiological interpretation system disclosed by Mardirossian that motivations set forth in the above rejection.

It is further submitted that all elements, "acquisition module, interpretation modules, correlation module and output devices" are disclosed in Mardirossian and Selvester et al. as discussed in the above rejections of claims 1, 10, and 25.

(D) On page 9, lines 12-20 of the Remarks, Applicants argues that in contrast to the teachings of the references, his invention includes measuring the raw data, analyzing numerous characteristics such as wave form height, distance between peaks, checking the interpretation, using measured features to generate an interpretation etc...In response to this argument, it is noted that the features upon which applicant relies (i.e., measuring the raw data, analyzing numerous characteristics such as wave form height, distance between peaks, checking the interpretation, using measured features to generate an interpretation) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read

into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

(E) On page 10 of the Remarks, Applicant argues that neither Mardirossian and Selvester does not teach acquisition device, interpretation module, nor correlating module, nor output device. Examiner disagrees, these elements are disclosed in Mardirossian and Selvester et al. as discussed in the above rejections of claims 1, 10, and 25. See also Mardirossian, col. 3, lines 41-52, col. 5, lines 16-18, col. 6, lines 12-14, col. 6, line 62 to col. 7, line 2 and Selvester et al. Figs 2, 3, col. 3, lines 55-58, col. 9, line 52-56.

Terminal Disclaimer

8. The terminal disclaimer filed on 01/31/2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of has been reviewed and is accepted. The terminal disclaimer has been recorded.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. "Personal identification and impairment assessment from brain activity" (5325862), "Signal interpretation engine" (US 2003/0149678 A1), "Apparatus and method for measuring pain, pain treatment and related techniques" (US 2002/0042563 A1).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim T. Bui whose telephone number is 703-305-5874. The examiner can normally be reached on Monday-Friday from 8:30A.M. to 5:00P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on 703-305-9588. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KTB
KTB
03/11/2005.

JOSEPH THOMAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600